

Listing and Amendments to the Claims

CLAIMS:

1. **(Currently Amended)** A video decoder for decoding a video bitstream for an image block, comprising:
 - a motion vector resolution reducer ~~(999)~~ for receiving decoded high resolution motion vectors included in the video bitstream and for reducing an accuracy of the high resolution motion vectors to correspond to a low resolution; and
 - a motion compensator ~~(960)~~, in signal communication with said motion vector resolution reducer, for forming a motion compensated high resolution prediction using the reduced accuracy motion vectors.
2. **(Currently Amended)** The video decoder of claim 1, further comprising:
 - an entropy decoder ~~(910)~~, in signal communication with said motion vector resolution reducer, for decompressing the video bitstream; and
 - an inverse quantizer/inverse transformer ~~(920)~~, in signal communication with said entropy decoder, for inverse quantizing and inverse transforming the decompressed bitstream to form a decoded prediction residual for adding to the motion compensated high resolution prediction to form a decoded image block.
3. **(Currently Amended)** A spatial scalable video decoder, comprising:
 - an upsampler ~~(1015)~~ for upsampling a low resolution prediction residual to form an upsampled prediction residual;
 - a motion compensator ~~(1035)~~ for forming a motion compensated full resolution prediction; and

an adder, in signal communication with said upsampler and said motion compensator, for adding the upsampled prediction residual to the motion compensated full resolution prediction to form a decoded image block.

4. **(Currently Amended)** The spatial scalable video decoder of claim 3, wherein said adder comprises:

a first adder ~~(1020)~~, in signal communication with said upsampler and said motion compensator, for adding the upsampled prediction residual to the motion compensated full resolution prediction to form a sum signal; and

a second adder ~~(1025)~~, in signal communication with said first adder, for adding a full resolution enhancement layer error signal to the sum signal to form a decoded block.

5. **(Original)** The spatial scalable video decoder of Claim 4, wherein the full resolution enhancement layer error signal is intra coded.

6. **(Currently Amended)** A spatial scalable video decoder for decoding a video bitstream of an image block, comprising:

an entropy decoder ~~(1005)~~ for decompressing the video bitstream;

an inverse quantizer/inverse transformer ~~(1010)~~, in signal communication with said entropy decoder, for inverse quantizing and inverse transforming the decompressed bitstream to form a coded prediction residual;

an upsampler ~~(1015)~~, in signal communication with said inverse quantizer/inverse transformer, for upsampling the coded prediction residual;

a motion compensator ~~(1035)~~, in signal communication with said entropy decoder, for forming a motion compensated prediction full resolution prediction; and

an adder ~~(1020)~~, in signal communication with said upsampler and said motion compensator, for adding the upsampled prediction residual to the motion compensated full resolution prediction to obtain a decoded image block.

7. **(Currently Amended)** A spatial scalable video decoder for decoding a base layer video bitstream and an enhancement layer video bitstream of an image block, comprising:

- an entropy decoder ~~(1005)~~ for decompressing the base layer video bitstream;
- an inverse quantizer/inverse transformer ~~(1010)~~, in signal communication with said entropy decoder, for inverse quantizing and inverse transforming the base layer video bitstream and the enhancement layer video bitstream to form a coded base layer prediction low resolution residual;
- an upsampler ~~(1015)~~, in signal communication with said inverse quantizer/inverse transformer, for upsampling the coded base layer prediction low resolution residual to form an upsampled base layer prediction residual;
- a motion compensator ~~(1035)~~, in signal communication with said entropy decoder, for forming a motion compensated prediction full resolution prediction;
- a first adder ~~(1020)~~, in signal communication with said upsampler and said motion compensator, for adding the motion compensated full resolution prediction to the upsampled base layer prediction residual to form a sum signal;
- another entropy decoder ~~(1040)~~ for decompressing the enhancement layer video bitstream;
- another inverse quantizer/inverse transformer ~~(1045)~~, in signal communication with said other entropy decoder, for inverse quantizing and inverse transforming the decompressed enhancement layer video bitstream to form a coded enhancement layer prediction full resolution residual; and
- a second adder ~~(1025)~~, in signal communication with said first adder, for adding the coded enhancement layer prediction full resolution residual to the sum signal to form a decoded image block.

8. **(Currently Amended)** The spatial scalable video decoder of Claim 7, further comprising a deblocking filter ~~(1050)~~, in signal communication with said second adder, for reducing blocking distortion.

9. **(Currently Amended)** The spatial scalable video decoder of Claim 8, wherein said deblocking filter ~~(1050)~~ is responsive to enhancement layer mode signals.

10. **(Currently Amended)** The spatial scalable video decoder of Claim 8, further comprising a high resolution reference picture store ~~(1030)~~, in signal communication with said motion compensator, for storing high resolution reference pictures for use in decoding both the base layer bitstream and the enhancement layer bitstream.

11. **(Original)** The spatial scalable video decoder of Claim 7, wherein the spatial scalable video decoder is without a low resolution reference picture store.

12. **(Currently Amended)** A method for decoding a video bitstream for an image block, comprising the steps of:

receiving decoded high resolution motion vectors included in the video bitstream and reducing ~~(1530)~~ an accuracy of the high resolution motion vectors to correspond to a low resolution; and

forming ~~(1535)~~ a motion compensated high resolution prediction using the reduced accuracy motion vectors.

13. **(Currently Amended)** The method of claim 12, further comprising the steps of:

decompressing ~~(1515)~~ the video bitstream; and

inverse quantizing and inverse transforming ~~(1520)~~ the decompressed bitstream to form a decoded prediction residual for adding to the motion compensated high resolution prediction to form a decoded image block

14. **(Currently Amended)** A method for spatial scalable video decoding, comprising the steps of:
 upsampling ~~(1625)~~ a low resolution prediction residual to form an upsampled prediction residual; and
 forming ~~(1635)~~ a motion compensated full resolution prediction; and
 adding the upsampled prediction residual to the motion compensated full resolution prediction to form a decoded image block.

15. **(Currently Amended)** The method of claim 14, wherein said adding step comprises the steps of:
 adding ~~(1640)~~ the upsampled prediction residual to the motion compensated full resolution prediction to form a sum signal; and
 adding ~~(1655)~~ a full resolution enhancement layer error signal to the sum signal to form a decoded block.

16. **(Original)** The method of Claim 15, wherein the full resolution enhancement layer error signal is intra coded.

17. **(Currently Amended)** A method for decoding a video bitstream of an image block, comprising the steps of:
 decoding ~~(1415)~~ the video bitstream;
 inverse quantizing and inverse transforming ~~(1420)~~ the decoded bitstream to form a prediction residual;
 upsampling ~~(1425)~~ the prediction residual to form an upsampled prediction residual;
 forming ~~(1435)~~ a motion compensated full resolution prediction from the decoded video bitstream; and
 combining ~~(1440)~~ the upsampled prediction residual with the motion compensated full resolution prediction to obtain a decoded image block.

18. **(Currently Amended)** A method for decoding a base layer video bitstream and an enhancement layer video bitstream of an image block, comprising the steps of:

inverse quantizing and inverse transforming ~~(1620)~~ the base layer video bitstream and the enhancement layer video bitstream to form a coded base layer prediction low resolution residual;

upsampling ~~(1625)~~ the coded base layer prediction low resolution residual to form an upsampled base layer prediction residual;

forming ~~(1635)~~ a motion compensated prediction full resolution prediction;

adding ~~(1640)~~ the motion compensated full resolution prediction to the upsampled base layer prediction residual to form a sum signal;

inverse quantizing and inverse transforming (1650) the enhancement layer video bitstream to form a coded enhancement layer prediction full resolution residual; and

adding ~~(1655)~~ the coded enhancement layer prediction full resolution residual to the sum signal to form a decoded image block.

19. **(Original)** The method of Claim 18, further comprising the step of reducing blocking distortion in the decoded image block .

20. **(Original)** The method of Claim 19, wherein said reducing step is responsive to enhancement layer mode signals.

21. **(Original)** The method of Claim 19, further comprising the step of storing high resolution reference pictures for use in decoding both the base layer bitstream and the enhancement layer bitstream.